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**RESPONSE UNDER 37 C.F.R. § 1.116
EXPEDITED PROCEDURE
GROUP 2834
PATENT APPLICATION**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q63652

Yoshihito ASAO, et al.

Appln. No.: 09/838,252

Group Art Unit: 2834

Confirmation No.: 9317

Examiner: Thanh LAM

Filed: April 20, 2001

For: AUTOMOTIVE ALTERNATOR

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#8
Req. for Reconsideration
Y Robinson
12/15/02

REQUEST FOR RECONSIDERATION UNDER 37 C.F.R. § 1.116

ATTN: BOX AF

Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Office Action dated September 11, 2002, reconsideration and allowance of the subject application are respectfully requested. Upon entry of this Request, claims 1-12 are pending in the application. Applicant respectfully submits that the pending claims define patentable subject matter.

Claims 1, 3, 4, 6 and 8-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Asao et al. (USP 6,049,154; hereafter "Asao") in view of Kitamura et al. (USP 4,739,204; hereafter "Kitamura"). Claims 2, 11 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Asao in view of Kitamura and Adachi (USP 5,798,586). Claims 5 and 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Asao in view of Kitamura and Ishida (USP 5,708,316). Applicant respectfully traverses the § 103 rejections of record.

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In the Amendment filed June 28, 2002, Applicant argued that independent claims 1 and 4 should be allowable over the combination of Asao and Kitamura because the combined references do not teach or suggest "a predetermined region of outer surfaces of said coil ends in a radial direction of said stator core forms a continuous circumferentially-smooth heat-conducting surface, said outer surfaces facing radially outwards from said stator core and extending from a vicinity of said end surface of said stator core to apex portions of said coil ends", as recited in independent claim 1. As shown in Figure 3 of the present application, the stator 10 includes a stator winding 12 installed in a stator core 11, wherein coil end groups 12f and 12r of the stator winding 12 are constructed by arranging coil ends 12a in rows circumferentially, and the outer circumferential surfaces of the coil ends 12a form a continuous circumferentially-smooth heat-conducting surface 28.

In response to the arguments for patentability with regards to claims 1 and 4, the Examiner (pages 5 and 6 of the Office Action) asserts that Kitamura (Figures 3 and 4) discloses the claimed continuous circumferentially-smooth heat-conducting surface via the surface of the enclosure 24. Further, the Examiner asserts that "[i]t would have been obvious ... to utilize the outer surfaces of end coils of Asao et al. and fit a circumferentially smooth heat-conducting surface as taught by Kitamura et al. to improve heat conducting from the end coils to the cooling channel."

Applicant respectfully submits that independent claim 1 would not have been rendered obvious in view Asao and Kitamura because even if Asao and Kitamura are combined in the manner proposed by the Examiner (which Applicant submits is incorrect), the resulting alternator

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would not include a stator winding wherein a predetermined region of outer surfaces of the coil ends in a radial direction of the stator core forms a continuous circumferentially-smooth heat-conducting surface, as claimed. Although Kitamura teaches surrounding the stator coil 11 with the enclosure 24 and filling the space between the enclosure 24 and the stator coil 11 with an insulating filler 25 such as synthetic resin, Applicant submits that it is quite clear that the enclosure 24 is not part of the coil ends of the stator coil 11, as required by claims 1 and 4. Rather, the enclosure 24 is simply a cover member made a metal such as aluminum which provides a liquid tight connection to the stator core 10 and is positioned such that it does not contact the coil ends of the stator coil 11.

Therefore, if Asao and Kitamura are combined in the manner proposed by the Examiner, such that the coil ends of the stator of Asao are surrounded with the enclosure 24 of Kitamura and the spaces between the coil end and the enclosure filled with the resin in order to improve heat conduction from the coil ends to the cooling channel, the outer surfaces of the coil ends of Asao would not be formed into the circumferentially-smooth heat-conducting surface, as claimed.

Further, the combination of Asao and Kitamura does not teach or suggest that the stator winding in which each of the strands of wire is wound at an interval of a predetermined number of slots so as to alternately occupy an inner layer and an outer layer in a slot depth direction within the slots, and turn portions of the strands of wire are lined up generally uniformly in a circumferential direction, as recited independent claim 4.

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In response to the arguments for patentability with regards to claim 4 in the Amendment filed June 28, the Examiner (page 6 of the Office Action) states that Applicant argues that claim 4 should be allowable over because "Asao does not disclose the strands of wire occupy the same layer in a slot depth direction within the slots with the turn portion[s] of the strands of wire lined up in the radial direction" (emphasis added). However, the Examiner's characterization of Applicant's arguments is incorrect (i.e., the opposite of what stated in the Amendment filed June 28) since Applicant argued that independent claim 4 should be allowable because "Asao discloses that the strands of wire occupy the same layer in a slot depth direction within the slots with the turn portions of the strands of wire lined up in the radial direction."

Lastly, the Examiner did not respond in the Office Action to Applicant's arguments that dependent claims 6, 8 and 9 should be allowable over Asao and Kitamura because the combined references do not teach the additional features recited in these claims. Specifically, the combined references do not teach or suggest the turn portions are disposed circumferentially so as to line up in a plurality of rows radially with radially-adjacent turn portions being in general contact with each other, as recited in dependent claim 6. Further, the combined references do not teach or suggest the turn portions are disposed circumferentially such that intermediate portions of the turn portions are in close proximity with each other, the intermediate portions being between portions where the turn portions extend out from the slots and portions where said turn portions are folded back, as recited in dependent claim 8. Similarly, the applied references do not disclose a resin filling the gaps between the turn portions, as recited in dependent claim 9.


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Accordingly, Applicant respectfully submits that independent claims 1 and 4, as well as dependent claims 2, 3, and 5-12, should be allowable because the combined references do not teach or suggest all of the features of the claims.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Christopher R. Lipp
Registration No. 41,157

SUGHRUE MION, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, D.C. 20037-3213
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

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Attorney Docket No.: Q63652